

Project Title	Funding	Strategic Plan Objective	Institution
Neurobiological mechanism of 15q11-13 duplication autism spectrum disorder	\$380,625	Q2.S.D	Beth Israel Deaconess Medical Center
TMLHE deficiency and a carnitine hypothesis for autism	\$60,000	Q2.S.D	Baylor College of Medicine
Engrailed targets and the control of synaptic circuits in Drosophila	\$352,100	Q2.Other	University of Puerto Rico Medical Sciences Campus
Autism phenotypes in Tuberous Sclerosis: Risk factors, features & architecture	\$149,881	Q2.S.D	King's College London
Elucidation of the developmental role of Jakmip1, and autism-susceptibility gene	\$31,474	Q2.Other	University of California, Los Angeles
Genetic and developmental analyses of fragile X mental retardation protein	\$438,391	Q2.S.D	Vanderbilt University Medical Center
Caspr2 as an autism candidate gene: A proteomic approach to function & structure	\$312,000	Q2.Other	University of Medicine & Dentistry of New Jersey - Robert Wood Johnson Medical School
Self-injurious behavior: An animal model of an autism endophenotype	\$0	Q2.Other	University of Florida
Homeostatic regulation of presynaptic function by dendritic mTORC1	\$32,747	Q2.Other	University of Michigan
Quantitative proteomic approach towards understanding and treating autism	\$75,000	Q2.S.D	Emory University
Retrograde synaptic signaling by Neurexin and Neuroligin in C. elegans	\$250,000	Q2.Other	Massachusetts General Hospital
Developing novel automated apparatus for studying battery of social behaviors in mutant mouse models for autism	\$0	Q2.Other	Weizmann Institute of Science
Role of GluK6 in cerebella circuitry development	\$58,442	Q2.Other	Yale University
Revealing protein synthesis defects in fragile X syndrome with new chemical tools	\$340,520	Q2.S.D	Stanford University
Modulation of fxr1 splicing as a treatment strategy for autism in fragile X syndrome	\$0	Q2.S.D	Stanford University
Functional and anatomical recovery of synaptic deficits in a mouse model of Angelman Syndrome	\$56,000	Q2.S.D	University of North Carolina at Chapel Hill
Cell adhesion molecules in CNS development	\$534,562	Q2.Other	The Scripps Research Institute - California
Role of intracellular mGluR5 in fragile X syndrome and autism	\$75,000	Q2.S.D	Washington University in St. Louis
L-type calcium channel regulation of neuronal differentiation	\$33,002	Q2.S.D	Stanford University
Elucidating the function of class 4 semaphorins in GABAergic synapse formation (supplement)	\$23,015	Q2.Other	Brandeis University
Elucidating the function of class 4 semaphorins in GABAergic synapse formation	\$336,922	Q2.Other	Brandeis University
MeCP2 modulation of BDNF signaling: Shared mechanisms of Rett and autism	\$314,059	Q2.S.D	University of Alabama at Birmingham
Met signaling in neural development and circuitry formation	\$249,000	Q2.Other	University of Arizona

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Serotonin signal transduction in two groups of autistic patients	\$0	Q2.Other	University of Illinois at Chicago
New approaches to local translation: SpaceSTAMP of proteins synthesized in axons	\$419,095	Q2.S.D	Dana-Farber Cancer Institute
Glial control of neuronal receptive ending morphology	\$418,275	Q2.Other	The Rockefeller University
Role of neuronal migration genes in synaptogenesis and plasticity	\$52,190	Q2.Other	Weill Cornell Medical College
Kinetics of drug macromolecule complex formation	\$712,921	Q2.Other	University of California, San Diego
Imaging PTEN-induced changes in adult cortical structure and function in vivo	\$300,156	Q2.Other	University of California, Los Angeles
Investigation of sex differences associated with autism candidate gene, Cyfip1	\$32,413	Q2.S.B	University of California, Los Angeles
Autism and the insula: Genomic and neural circuits	\$254,696	Q2.Other	California Institute of Technology
Olfactory abnormalities in the modeling of Rett syndrome	\$351,575	Q2.S.D	Johns Hopkins University
Urokinase-type plasminogen activator plasma concentration and its relationship to hepatocyte growth factor (HGF) and GABA levels in autistic children	\$8,505	Q2.Other	Hartwick College
A cerebellar mutant for investigating mechanisms of autism in Tuberous Sclerosis	\$149,958	Q2.S.D	Boston Children's Hospital
Dysregulation of protein synthesis in fragile X syndrome	\$1,117,731	Q2.S.D	National Institutes of Health
Function and dysfunction of neuroligins in synaptic circuits	\$750,000	Q2.Other	Stanford University
Function of neuexins	\$473,710	Q2.Other	Stanford University
Aberrant synaptic form and function due to TSC-mTOR-related mutation in autism spectrum disorders	\$300,000	Q2.S.D	Columbia University
In-vivo imaging of neuronal structure and function in a reversible mouse model for autism.	\$0	Q2.S.D	Baylor College of Medicine
Regulation of synaptogenesis by cyclin-dependent kinase 5	\$0	Q2.Other	Massachusetts Institute of Technology
Probing a monogenic form of autism from molecules to behavior	\$0	Q2.S.D	Stanford University
Morphogenesis and function of the cerebral cortex	\$409,613	Q2.Other	Yale University
Genetic studies of autism-related Drosophila neuexin and neuroligin	\$489,104	Q2.Other	University of North Carolina at Chapel Hill
A sex-specific dissection of autism genetics	\$0	Q2.S.B	University of California, San Francisco
Role of autism-susceptibility gene, CNTNAP2, in neural circuitry for vocal communication	\$0	Q2.Other	University of California, Los Angeles
Dynamic regulation of Shank3 and ASD	\$646,316	Q2.Other	Johns Hopkins University
Functional circuit disorders of sensory cortex in ASD and RTT	\$254,976	Q2.S.D	University of Pennsylvania

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Imaging signal transduction in single dendritic spines	\$382,200	Q2.Other	Duke University
Young development of a novel PET ligand for detecting oxytocin receptors in brain	\$261,360	Q2.Other	Emory University
Young development of a novel PET ligand for detecting oxytocin receptors in brain (supplement)	\$176,000	Q2.Other	Emory University
High-throughput DNA sequencing method for probing the connectivity of neural circuits at single-neuron resolution	\$464,475	Q2.Other	Cold Spring Harbor Laboratory
Functional analysis of neuroligin IV in Drosophila	\$0	Q2.Other	University of California, Los Angeles
The role of neuroligin IV in central nervous system development	\$100,466	Q2.Other	University of California, Los Angeles
Elucidation and rescue of amygdala abnormalities in the Fmr1 mutant mouse model of fragile X syndrome	\$150,000	Q2.S.D	George Washington University
Synaptic phenotype, development, and plasticity in the fragile X mouse	\$395,134	Q2.S.D	University of Illinois at Urbana Champaign
The functional link between DISC1 and neuroligins: Two genetic factors in the etiology of autism	\$0	Q2.S.D	Children's Memorial Hospital, Chicago
Allelic choice in Rett syndrome	\$390,481	Q2.S.D	Winifred Masterson Burke Medical Research Institute
Activity-dependent phosphorylation of MeCP2	\$177,055	Q2.S.D	Harvard Medical School
Inhibitory mechanisms for sensory map plasticity in cerebral cortex	\$328,644	Q2.Other	University of California, Berkeley
Functional analysis of patient mutations in EPHB2, an ASD candidate gene- Project 1	\$177,512	Q2.Other	Yale University
Identification of candidate genes at the synapse in autism spectrum disorders	\$168,839	Q2.Other	Yale University
In vivo targeted gene silencing, a novel method	\$192,500	Q2.Other	Indiana University-Purdue University Indianapolis
Investigation of protocadherin-10 in MEF2- and FMRP-mediated synapse elimination	\$53,942	Q2.S.D	University of Texas Southwestern Medical Center
Presynaptic regulation of quantal size by the cation/H ⁺ exchangers NHE6 & NHE9	\$33,932	Q2.Other	University of California, Berkeley
Neuropeptide regulation of juvenile social behaviors	\$29,550	Q2.Other	Boston College
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	\$0	Q2.S.E	University of Melbourne
Genetic rescue of fragile X syndrome in mice by targeted deletion of PIKE	\$0	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Dysregulation of mTOR signaling in fragile X syndrome	\$415,000	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Dysregulation of mTOR signaling in fragile X syndrome (supplement)	\$72,034	Q2.S.D	Albert Einstein College of Medicine of Yeshiva University
Bi-directional regulation of Ube3a stability by cyclic AMP-dependent kinase	\$60,000	Q2.S.D	University of North Carolina at Chapel Hill

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Characterizing the regulatory pathways and regulation of AUTS2	\$57,964	Q2.Other	University of California, San Francisco
Role of CNTNAP2 in neuronal structural development and synaptic transmission	\$53,500	Q2.Other	Stanford University
Identification of genetic pathways that regulate neuronal circuits in C. elegans	\$47,114	Q2.Other	University of California, San Diego
The role of the GRIP protein complex in AMPA receptor trafficking and autism spectrum disorders	\$0	Q2.Other	Johns Hopkins University
Regulation of cortical critical periods in a mouse model of autism	\$60,000	Q2.S.D	Northwestern University
The role of the new mTOR complex, mTORC2, in autism spectrum disorders	\$625,998	Q2.Other	Baylor College of Medicine
Functional analysis of patient mutations in EPHB2, an ASD candidate gene- Core	\$62,475	Q2.Other	McLean Hospital
RNA dysregulation in autism	\$125,000	Q2.Other	The Rockefeller University
Understanding the role of Epac2 in cognitive function	\$47,232	Q2.Other	Northwestern University
Dual modulators of GABA-A and Alpha7 nicotinic receptors for treating autism	\$615,849	Q2.Other	University of California, Irvine
Multigenic basis for autism linked to 22q13 chromosomal region	\$125,000	Q2.S.D	Hunter College of the City University of New York (CUNY) jointly with Research Foundation of CUNY
High metabolic demand of fast-spiking cortical interneurons underlying the etiology of autism	\$54,500	Q2.Other	Weill Cornell Medical College
Making the connection between autism, serotonin and hedgehog signaling	\$125,635	Q2.S.D	Medical Research Council-National Institute for Medical Research
Semaphorin4D and PlexinB1 mediate GABAergic synapse development in mammalian CNS	\$27,814	Q2.Other	Brandeis University
Novel candidate mechanisms of fragile X syndrome	\$92,448	Q2.S.D	Yale University
ERK signaling in autism associated with copy number variation of 16p11.2	\$51,290	Q2.Other	Case Western Reserve University
Physiological studies in a human stem cell model of 15q duplication syndrome	\$60,000	Q2.S.D	University of Connecticut
Genetic model to study the ASD-associated gene A2BP1 and its target PAC1	\$62,500	Q2.Other	Weizmann Institute of Science
Studying Rett and Fragile X syndrome in human ES cells using TALEN technology	\$0	Q2.S.D	Whitehead Institute for Biomedical Research
Role of major vault protein in autism	\$59,972	Q2.Other	Yale University
Probing synaptic receptor composition in mouse models of autism	\$124,998	Q2.S.D	Boston Children's Hospital
Shank3 in synaptic function and autism	\$401,250	Q2.Other	Massachusetts Institute of Technology
The role of Fox-1 in neurodevelopment and autistic spectrum disorder	\$145,757	Q2.Other	University of California, Los Angeles

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The role of CNTNAP2 in embryonic neural stem cell regulation	\$0	Q2.Other	Johns Hopkins University School of Medicine
BDNF and the restoration of synaptic plasticity in fragile X and autism	\$470,063	Q2.S.D	University of California, Irvine
The microRNA pathway in translational regulation of neuronal development	\$352,647	Q2.S.D	University of Massachusetts Medical School
A functional genomic analysis of the cerebral cortex	\$256,413	Q2.Other	University of California, Los Angeles
Cortical circuit changes and mechanisms in a mouse model of fragile X syndrome	\$278,656	Q2.S.D	University of Texas Southwestern Medical Center
The role of UBE3A in autism	\$312,501	Q2.S.D	Harvard Medical School
Molecular signatures of autism genes and the 16p11.2 deletion	\$62,500	Q2.Other	Massachusetts General Hospital
Defining cells and circuits affected in autism spectrum disorders	\$336,872	Q2.Other	The Rockefeller University
Functional role of IL-6 in fetal brain development and abnormal behavior	\$42,232	Q2.Other	California Institute of Technology
Mechanisms of synapse elimination by autism-linked genes	\$434,883	Q2.S.D	University of Texas Southwestern Medical Center
Coordinated control of synapse development by autism-linked genes	\$0	Q2.S.D	University of Texas Southwestern Medical Center
Mechanisms of mGluR5 function and dysfunction in mouse autism models	\$406,760	Q2.S.D	University of Texas Southwestern Medical Center
Study of fragile X mental retardation protein in synaptic function and plasticity	\$317,077	Q2.S.D	University of Texas Southwestern Medical Center
Analysis of Shank3 complete and temporal and spatial specific knockout mice	\$481,448	Q2.Other	Duke University
Engrailed genes and cerebellum morphology, spatial gene expression and circuitry	\$470,003	Q2.Other	Sloan-Kettering Institute for Cancer Research
Role of neurexin in the amygdala and associated fear memory	\$175,000	Q2.Other	Columbia University
Neurexin-neuroligin trans-synaptic interaction in learning and memory	\$200,000	Q2.Other	Columbia University
MicroRNAs in synaptic plasticity and behaviors relevant to autism	\$131,220	Q2.S.D	Massachusetts General Hospital
Excessive cap-dependent translation as a molecular mechanism underlying ASD	\$0	Q2.Other	New York University
Regulation of 22q11 genes in embryonic and adult forebrain	\$308,631	Q2.S.D	George Washington University
Regulation of 22q11 genes in embryonic and adult forebrain (supplement)	\$24,262	Q2.S.D	George Washington University
The role of MeCP2 in Rett syndrome	\$382,858	Q2.S.D	University of California, Davis

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Function and structure adaptations in forebrain development	\$541,770	Q2.Other	University of Southern California
A family-genetic study of autism and fragile X syndrome	\$751,420	Q2.S.D	Northwestern University
Endosomal NHE6 in long-range connectivity and autism	\$62,500	Q2.Other	Brown University
Investigation of social brain circuits in mouse models of the 16p11.2 locus	\$175,000	Q2.Other	Cold Spring Harbor Laboratory
Mouse models of human autism spectrum disorders: Gene targeting in specific brain regions	\$400,000	Q2.S.D	University of Texas Southwestern Medical Center
Identification of targets for the neuronal E3 ubiquitin ligase PAM	\$0	Q2.S.D	Massachusetts General Hospital
Neurologin, oxidative stress and autism	\$150,000	Q2.Other	Oklahoma Medical Research Foundation
The impact of Pten signaling on neuronal form and function	\$346,014	Q2.Other	Dartmouth College
Regulation of spine morphogenesis by NrCAM	\$185,000	Q2.Other	University of North Carolina at Chapel Hill
Investigation of a possible role of the protocadherin gene cluster in autism	\$150,000	Q2.Other	Columbia University
Extended tracking of single synaptic proteins with upconverting nanoparticles	\$10,819	Q2.Other	University of California; Lawrence Berkeley National Laboratory
Effect of paternal age on mutational burden and behavior in mice	\$222,000	Q2.Other	University of North Carolina at Chapel Hill
The role of intracellular metabotropic glutamate receptor 5 at the synapse	\$13,400	Q2.S.D	Washington University in St. Louis
A novel transplantation assay to study human PTEN ASD alleles in GABAergic interneurons	\$60,000	Q2.Other	University of California, San Francisco
Molecular mechanisms of the synaptic organizer alpha-neurexin	\$383,267	Q2.Other	University of Michigan
Impact of SynGAP1 mutations on synapse maturation and cognitive development	\$789,981	Q2.Other	The Scripps Research Institute - Florida
Cortactin and spine dysfunction in fragile X	\$32,875	Q2.S.D	University of California, Irvine
Molecular dissection of calmodulin domain functions	\$321,473	Q2.Other	University of Iowa
The role of genetics in communication deficits in autism spectrum disorders	\$60,000	Q2.S.D	University of Pennsylvania
Upper motor neuron plasticity in the MeCP2-duplication syndrome of autism	\$62,500	Q2.S.D	Baylor College of Medicine
Understanding the basic neurobiology of Pitt-Hopkins syndrome	\$60,000	Q2.S.D	The University of Alabama at Birmingham
Modeling 5-HT-absorbing neurons in neuropathology of autism	\$250,500	Q2.Other	Albert Einstein College of Medicine of Yeshiva University
Why are autistic females rare and severe? An approach to autism gene identification.	\$28,600	Q2.S.B	Johns Hopkins University

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Fragile X syndrome target analysis and its contribution to autism	\$134,477	Q2.S.D	The Rockefeller University
Genomic and epigenomic effects of large CNV in neurons from iPSC	\$2,355,000	Q2.S.G	Stanford University
The striatal circuitry underlying autistic-like behaviors	\$31,975	Q2.Other	Duke University
Modulation of RhoA signaling by the mRNA binding protein hnRNPQ1	\$30,912	Q2.Other	Emory University
Translational regulation of adult neural stem cells	\$396,944	Q2.S.D	University of Wisconsin - Madison
Transcriptional responsiveness in lymphoblastoid cell lines	\$0	Q2.Other	University of Pennsylvania
PI3K/mTOR signaling as a novel biomarker and therapeutic target in autism	\$0	Q2.Other	Emory University
Early expression of autism spectrum disorder in experimental animals	\$0	Q2.Other	Neurochlore
Role of Sema7A in functional organization of neocortex	\$423,750	Q2.S.D	Mount Sinai School of Medicine
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	\$0	Q2.S.E	University of Melbourne
Functional analysis of EFR3A mutations associated with autism	\$156,250	Q2.Other	Yale University
Pleiotropic roles of dyslexia genes in neurodevelopmental language impairments	\$42,232	Q2.S.D	Yale University
Role of negative regulators of FGF signaling in frontal cortex development and autism	\$45,000	Q2.Other	University of California, San Francisco
Using fruit flies to map the network of autism-associated genes	\$156,245	Q2.Other	University of California, San Diego
Cerebellar plasticity and learning in a mouse model of autism	\$156,250	Q2.Other	University of Chicago
Perturbed cortical patterning in autism	\$60,000	Q2.Other	Seattle Children's Hospital
Altered gastrointestinal function in the neuroligin-3 mouse model of autism	\$0	Q2.S.E	University of Melbourne
Proteome and interaction networks in autism	\$156,250	Q2.Other	Harvard Medical School
High throughput screen for small molecule probes for neural network development	\$405,000	Q2.Other	Johns Hopkins University
Genetically defined stem cell models of Rett and fragile X syndrome	\$350,000	Q2.S.D	Whitehead Institute for Biomedical Research
Macrocephalic autism: Exploring and exploiting the role of PTEN	\$0	Q2.Other	University of Wisconsin - Madison
TrkB agonist therapy for sensorimotor dysfunction in Rett syndrome	\$147,806	Q2.S.D	Case Western Reserve University
Roles of miRNAs in regulation of Foxp2 and in autism	\$45,000	Q2.Other	Louisiana State University

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MTHFR functional polymorphism C677T and genomic instability in the etiology of idiopathic autism in simplex families	\$0	Q2.Other	Queen's University
Neurobiology of RAI1, the causal gene for Smith-Magenis syndrome	\$155,380	Q2.S.D	Stanford University
Mesocorticolimbic dopamine circuitry in mouse models of autism	\$436,362	Q2.S.D	Stanford University
Investigating the homeostatic role of MeCP2 in mature brain	\$35,832	Q2.S.D	Baylor College of Medicine
A stem cell based platform for identification of common defects in autism spectrum disorders	\$0	Q2.S.D	The Scripps Research Institute - California
Deciphering the function and regulation of AUTS2	\$0	Q2.Other	University of California, San Francisco
Mechanism of UBE3A imprint in neurodevelopment	\$34,439	Q2.S.D	University of California, Davis
Pathophysiology of MECP2 spectrum disorders (Career Development Award Proposal)	\$179,981	Q2.S.D	Baylor College of Medicine
Underlying mechanisms in a cerebellum-dependent model of autism	\$60,000	Q2.S.D	Harvard Medical School

